Proposal for unified system design meta flow in task-leve instruction-level design technology research for multi-me applications

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Abstract
This paper describes an attempt to bring together the many different system design flows architecture and system design technology research, into a more abstract but unifying m system and architecture design flows have a strong resemblance and unnecessary overl lack of a common and consistent terminology coupled to a common reference basis, it is to compare and reuse (sub)steps. In addition, there is a too strong separation between re communities. To alleviate this problem, we introduce a more abstract but unifying meta fl bridge the gap between the existing flows. From this meta flow, a particular design flow c a given application (domain) by leaving out the non-required stages/steps, by selecting a which is compatible with the partial meta-flow order, and by selecting the appropriate tec remaining (sub)steps (e.g. the type of scheduler). This paper focuses on the principles at instruction-level abstractions. It also provides an illustration of the pourer of the meta-flow realistic multi-media compression demonstrator from the MPEG4 context

Index Terms
Inspec
Controlled Indexing
embedded systems high level synthesis

Non-controlled Indexing
instruction-level meta flow multi-media applications task-level unified systen
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Task concurrency management experiment for power-effi up of embedded MPEG4 IM1 player

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Abstract
Addresses the concurrent task management of complex multimedia systems, like the MP (IMplementation 1) player. Starting with a critical part of the code in the IM1 player, we e concurrency hidden by implementation decisions and represented it with our "grey-box" r Based on this "grey-box" model, high-level transformations have been made to improve t scheduling the transformed graph, we have improved the performance of an important bc layer of the IM1 player while simultaneously lowering the system energy cost. A two-proc is used in the experiment, combining processors running at a high Vdd (drain supply volt respectively

Index Terms
Inspec
Controlled Indexing
concurrency control embedded systems multimedia systems performance ev video coding video equipment

Non-controlled Indexing
complex multimedia systems concurrent task management drain supply voltac MPEG4 IM1 player grey-box model high-level transformations implementatio power-efficient speedup system energy cost system layer performance task management transformed graph scheduling two-processor target platform

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